REMARKS/ARGUMENTS

The specification has been revised to conform it to the preferred format for U.S. patent applications as required in the Office Action, and a Substitute Specification and Comparison Copy are submitted herewith.

Claims 1-5 and 7-11 are pending in this application. Claim 6 has been canceled. Claims 1-5 and 7-10 have been amended.

The claims were reworded to substitute the routinely used "wherein" and "including" for the less common "characterized in that" and to delete all drawing reference numerals from them. These changes were made for purposes of clarification unrelated to patentability concerns.

The drawings were objected to because several claimed elements were viewed as not being shown. Applicants respond to this objection as follows.

With regard to claim 3, Fig. 1 has been revised to show measuring device 2', including measuring head 2a in the region of cloth take-off 19.

With regard to claim 4, the drawings as originally filed already show measuring device 2" arranged at the edge of warp beam 11. Fig. 1 has been revised to also show measuring head 2a associated with measuring device 2".

With regard to claim 5, Fig. 5 illustrates a control unit as used by the present invention. Fig. 5 has been amended by designating the control unit with letters CU.

The foregoing drawing revisions contain no new matter.

Claim 6 has been canceled. In its stead, applicants submit a new independent method claim 11 from which claims 7-10 depend.

Claim 9 has been reworded to delete "in particular".

In view of the foregoing, applicants submit that all Section 112 objections and rejections have been overcome and request that these rejections be retracted.

Claims 1, 6 and 7 were rejected for anticipation, and the remaining claims 2-4 and 8-10 were rejected for obviousness, principally over Tullis (6,118,132) because Tullis was viewed as disclosing all elements of independent claims 1 and 11 (which replaces now-canceled method claim 6).

Claim 1 now recites in relevant parts that the measuring device includes a modular measuring head in which "a light source for oblique illumination of the moved surface within the measuring window, an image sensor, and an electronic circuit are integrated for effecting a pattern recognition ...."

Independent method claim 11 is similarly limited and recites in relevant parts "providing a measurement device, integrating a modular measuring head including a two-dimensional window, a light source for obliquely illuminating the moved surface within the measuring window, an image sensor, and an electronic circuit in the measurement device, with the measurement device producing digital signals ...."

Tullis does not disclose a modular measuring head for measuring movements on a weaving machine wherein an image sensor and an electronic circuit are integrated in the measuring head. Tullis teaches that the components, such as two photosensor arrays, a shaft encoder and a processing unit containing a microprocessor and a memory, are arranged at widely spaced-apart locations on the machine (see Figs. 4 and 5). These components of Tullis are arranged at different, spaced-apart places on the weaving machine, since the shaft encoder must be near the machine drive while the photosensor array must be near the warp or cloth.

Moreover, Tullis does not disclose or suggest a light source for oblique illumination integrated into the measuring head.

Tullis further teaches away from the present application; its system is not capable of being operated with components integrated into a measuring head because of the necessarily wide disposal of the components on the machine. Further, the illumination system of Tullis shown in Fig. 6 is bulky and therefore unsuitable for integration into a modular measuring head. Fig. 7 shows an oblique light source, but the light source includes an illumination optics 34

which "may comprise a single element or a combination of lenses, filters (spatial, spectral and/or polarizing) and/or holographic elements (col. 8, lines 31-33)". Thus, the oblique light source shown in Fig. 7 is described as complicated and bulky, and it is therefore also not suitable for integration into a modular measuring head.

Tullis therefore has no disclosure or suggestion to integrate a light source for oblique illumination, an image sensor and an electronic circuit in a measuring head.

Accordingly, independent apparatus claim 1 is not anticipated by Tullis.

The same applies to independent method claim 11 because it is limited amongst others to "integrating a modular measuring head including a two-dimensional window, a light source for obliquely illuminating the moved surface within the measuring window, an image sensor, and an electronic circuit in the measurement device ....", which is neither disclosed nor suggested by Tullis.

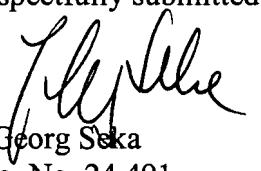
Thus, independent claims 1 and 11 and therewith dependent claims 2-5 and 7-10 are allowable.

CONCLUSION

In view of the foregoing, applicants submit that this application is in condition for allowance, and a formal notification to that effect at an early date is requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (415) 273-4730 (direct dial).

Respectfully submitted,



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